

PRODUCT INFORMATION



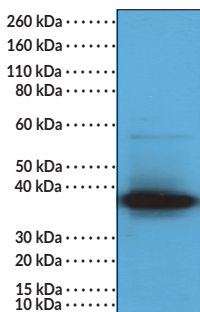
RNase H2B (C-Term) Rabbit Monoclonal Antibody (Clone RM433)

Item No. 35614

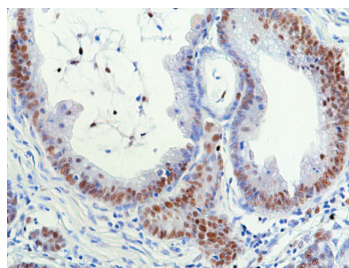
Overview and Properties

| | |
|----------------------------|---|
| Contents: | This vial contains 100 µl of protein A-affinity purified monoclonal antibody. |
| Synonyms: | Aicardi-Goutieres Syndrome 2 Protein, Deleted in Lymphocytic Leukemia 8, DLEU8, Ribonuclease H2 Subunit B |
| Immunogen: | Peptide from the C-terminal region of human RNase H2B |
| Cross Reactivity: | (+) RNase H2B |
| Species Reactivity: | (+) Human |
| Form: | Liquid |
| Storage: | -20°C (as supplied) |
| Stability: | ≥1 year |
| Storage Buffer: | PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide |
| Clone: | RM433 |
| Host: | Rabbit |
| Isotype: | IgG |
| Applications: | Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:100-1:200 for IHC and 1:1,000-1:2,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically. |

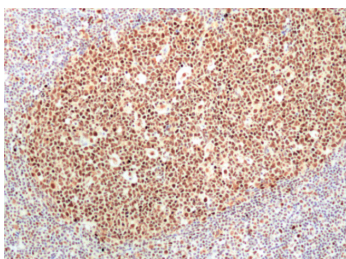
Images



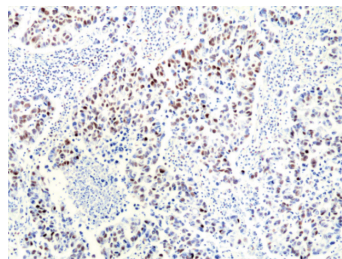
WB of Jurkat cell lysates using RNASE H2B (C-Term) Rabbit Monoclonal Antibody (Clone RM433) at a dilution of 1:1,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human colon cancer tissue sections using RNASE H2B (C-Term) Rabbit Monoclonal Antibody (Clone RM433) at a dilution of 1:100.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human tonsil tissue sections using RNASE H2B (C-Term) Rabbit Monoclonal Antibody (Clone RM433) at a dilution of 1:100.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human lung cancer tissue sections using RNASE H2B (C-Term) Rabbit Monoclonal Antibody (Clone RM433) at a dilution of 1:100.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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Description

RNase H2B is a non-catalytic accessory subunit of RNase H2, the major nuclear enzyme responsible for degrading RNA/DNA hybrids and hydrolyzing ribonucleotides misincorporated during genomic replication.¹⁻³ It is localized to nuclear replication foci, where it forms a complex with RNase H2A and RNase H2C, and contains a C-terminal PIP-box motif that mediates its interaction with proliferating cell nuclear antigen (PCNA), which confirms strand specificity to RNase H2.³ Biallelic mutations in *RNASEH2B* induce Aicardi-Goutières syndrome (AGS), an autoimmune disorder characterized by constitutive activation of cGAS and IFN overproduction.⁴ Mutations in *RNASEH2B* are also associated with uncomplicated hereditary spastic paraplegia.⁵ Cayman's RNase H2B (C-Term) Rabbit Monoclonal Antibody (Clone RM433) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

1. Reijns, M.A.M., Bubeck, D., Gibson, L.C.D., *et al.* The structure of the human RNase H2 complex defines key interaction interfaces relevant to enzyme function and human disease. *J. Biol. Chem.* **286**(12), 10530-10539 (2011).
2. Chon, H., Vassilev, A., DePamphilis, M.L., *et al.* Contributions of the two accessory subunits, RNASEH2B and RNASEH2C, to the activity and properties of the human RNase H2 complex. *Nucleic Acids Res.* **37**(1), 96-110 (2009).
3. Bubeck, D., Reijns, M.A.M., Graham, S.C., *et al.* PCNA directs type 2 RNase H activity on DNA replication and repair substrates. *Nucleic Acids Res.* **39**(9), 3652-3666 (2011).
4. Feng, S. and Cao, Z. Is the role of human RNase H2 restricted to its enzyme activity? *Prog. Biophys. Mol. Biol.* **121**(1), 66-73 (2016).
5. Spagnoli, C., Frattini, D., Salerno, G.G., *et al.* RNASEH2B pathogenic gene variant in uncomplicated hereditary spastic paraplegia: Report of a new patient. *Neuropediatrics* **49**(6), 419 (2018).